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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SAXENA, AKASH

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/791,473	Applicant(s) FURUHASHI ET AL.	
	Examiner AKASH SAXENA	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim(s) 1, 2, 6, 10 and 12-14 has/have been presented for examination based on amendment filed on 10th June 2008.
2. Claim(s) 1 and 10 is/are amended.
3. Claim(s) 12-14 is/are newly added.
4. Claim(s) 1, 2, 6, 10 and 12-14 are rejected under 35 USC § 102.
5. The arguments submitted by the applicant have been fully considered. Claims 1, 2, 6, 10 and 12-14 remain rejected and this action is made FINAL. The examiner's response is as follows.

Claim Interpretation

6. Amended claim 1 discloses:

displaying a plurality of 3D models, the plurality of 3D models as a whole having a hierarchical structure;
specifying one 3D model of the hierarchical structure 3-D as a retrieval key by allowing a user to designate one of the plurality of 3D models sub elements displayed, the user being able to change to the level of the hierarchy to which the specification is made with a successive operation;

Each of the 3D models, as interpreted from specification (Specification: Fig.3 & 6), are complete objects them selves not parts of the 3D object.

Response to argument for Claim Rejections - 35 USC § 102

(Argument 1) Applicant has argued in Remarks Pg.18:

A feature of the claimed invention is that the specified level of hierarchy can be changed (moved) by the user's operation to designate one 3D model itself.

On the other hand, Murao, in paragraph [0124] for example, discloses a restrictive condition defined in accordance with an instruction entered by a user.

This restrictive condition means a condition which is added to the bounding tree of a reference model, and used as a search key (see [0124]), and specifically, it merely corresponds to the size of a bounding box or an object type represented by the node (see paragraph [0126]), or the designation of the distance between two bounding boxes (see paragraph [0127]).

The claimed invention actually provides the structure that the specified level of hierarchy can be changed (moved) by the user's operation to designate one 3D model itself, and therefore, it is entirely different from that disclosed by Murao which discloses the idea to designate a restrictive condition in accordance with an instruction entered by a user. Independent claims 1 and 10 have been amended to clarify such features.

(Response 1) Examiner respectfully disagrees and during patent examination gives the broadest reasonable interpretation consistent with the specification to the claims. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Prater, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969), however, claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). In this case the applicant's direction to Pg.15-16, Fig.16A-B and 17 is noted however, Murao teaches this limitation as presented, by allowing selection of a sub-tree thereby designating a model/sub-model to search (Murao: [0046], [0052] at least). Since Murao is directed towards CAD models (most easily divisible into sub-tree/components) (Murao: [0013]-[0016]) the graphical clicking aspect would be inherent in to the invention. Applicant's comparison to restrictive condition is not mapped to this particular limitation.

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Applicant has not presented a persuasive argument in view of cited case law and examiner maintains that in view of In re Morris and In re Prater, giving the broadest reasonable interpretation Murao anticipates every limitation of the claim.

Claims 12-14 are newly rejected under Murao as well. Examiner respectfully maintains the rejection.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claim 1, 2, 6, 10 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. 2002/0004710 A1 by Takaaki Murao (Murao hereafter).**

Regarding Claim 1 (Updated 8/18/08)

Murao teaches *a 3D model retrieval method for retrieving a 3D model similar to the specified 3D model from a plurality of 3D models stored in a database* (Murao: [0024][0121]), *the method comprising displaying a plurality of 3D models* (Murao: Fig.12-13), *the plurality of 3D models as a whole having a hierarchical structure* (Murao: Fig. 14) *as 3D model having a hierarchical structure; specifying one 3D model belonging to the hierarchical structure as a retrieval key by allowing a user to designate one of the plurality of 3D models displayed* (Murao: [0044]; Fig.21 “solid surface model”), *allowing the user to change the level of the hierarchy to which the specification is made by successively designating of the designated model* (Murao: [0044]-[0045]) *as selecting a sub-tree from the selected tree using the retrieval key; acquiring the feature values of the 3D model specified as the retrieval key from the database* (Murao: [0040][0046]); *acquiring the feature values of 3D model stored in the database as objects to be retrieved* (Murao: [0063] [0121]-[0130],[0067]-[0069]

objects for each node); *calculating the similarity between the 3D model specified as the retrieval key and 3D model stored as objects to be retrieved in the database by evaluating the differences of the both of the acquired feature values* (Murao: [0037]-[0041]); *sorting the results of the calculation of the similarity* (Murao: [0040] as selecting the most similar result involves determination for most similar therefore result sorting would be inherent); *and displaying a 3D model retrieved based on the result of the sorting* (Murao: [0167]-[0168]).

Regarding Claim 2

Murao teaches that *the hierarchical structure of the 3D model is a tree structure* (Murao: [0040]).

Regarding Claim 6

Murao teaches that the 3D model has attribute information corresponding to each of the 3D models (Murao: [0069]-[0070], [0076], [0126]), and the displaying the 3D model includes displaying attribute information corresponding to the 3D model at the same time (Murao: [0168]-[0169]).

Regarding Claim 10 (Updated 8/18/08)

Murao teaches a 3-D model retrieval system for retrieving a 3D model from a plurality of 3D models stored in a database by using various feature values calculated from the selected 3D model (Murao: Abstract; [0001]) comprising a computer system (Murao: [0056]-[0060]). Further claim 10 discloses similar limitations as claim 1 and is rejected for the same reasons as claim 1.

Regarding Claim 12 (new)

Murao teaches designating one of the plurality of 3D models is a clicking on a designated 3D model displayed as user designating selective analysis of the sub-tree without accounting if the overall shape of the 3 D model matches (Murao: [0046]). Further Murao's teaches are directed towards CAD models which are graphical entities, only selectable as 3D models (Murao: [0013]-[0016] & [0026]).

Regarding Claim 13 (new)

Murao teaches hierarchical structure has a plurality of levels of the hierarchy (Murao: Fig.14) and each level has at least one 3D model (Murao: Fig.13) and is connected with another level by at least one 3D model (Murao: Fig.14).

Regarding Claim 14 (new)

Murao teaches allowing the user to move the specified level of the hierarchy toward a higher level of the hierarchy than a present level by successive designating of the designated 3D model as user designating selectively an analysis of the sub-tree without accounting if the overall shape of the 3 D model matches (Murao: [0046]), ignoring the hierarchy above the sub-tree (representing a 3D part) thereby moving it higher.

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Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AKASH SAXENA whose telephone number is (571)272-8351. The examiner can normally be reached on 9:30 - 6:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on (571)272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

/Akash Saxena/

Examiner, Art Unit 2128